

Understanding
ARTERY PROBLEMS

Lower Extremity and Aneurysm



UNDERSTANDING ARTERY PROBLEMS

Lower extremity artery problems occur when blood vessels (called arteries) in the groin or legs are narrowed or blocked. This cuts off the blood supply to the rest of the leg. An **aortic aneurysm** is when a large artery in the abdomen expands like a balloon. Both conditions can be serious. But, with early diagnosis and treatment, problems can often be avoided.



Lower Extremity Blockages

When arteries in the groin or upper leg narrow or become blocked, blood flow to the lower leg and foot is reduced. The resulting problems depend on the amount of blockage and the length of time the blood flow has been reduced. These are the early signs of an artery problem:

- Pain when walking (called **claudication**)
- Changes in skin color
- Slow-healing sores (mostly on the feet)

In time, your symptoms may stay the same or worsen.

Aortic Aneurysm

When a large artery in the abdomen "balloons," it's called an aortic aneurysm. It's caused by the weakening of the artery wall. Most often, there are no symptoms other than low back pain. Large aneurysms can leak or burst without warning. This causes internal bleeding that most often leads to death. Fortunately, aneurysms can be treated surgically before they leak or burst.

This booklet is not intended as a substitute for professional medical care. Only your doctor can diagnose and treat a medical problem.

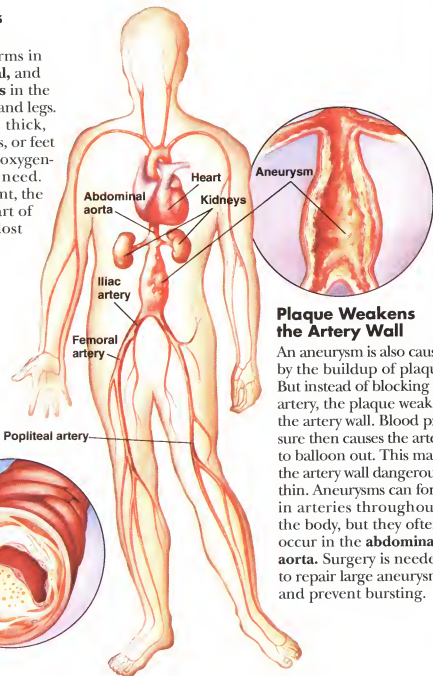
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HOW ARTERIES BECOME UNHEALTHY

As you get older, fat and other substances build up inside the artery walls. This condition is called **atherosclerosis**. The buildup is called **plaque**. Over time, plaque can partly or completely block affected arteries and weaken artery walls.

Plaque Blocks Blood Flow

Plaque often forms in the **iliac**, **femoral**, and **popliteal** arteries in the lower abdomen and legs. When plaque is thick, the legs, buttocks, or feet may not get the oxygen-rich blood they need. Without treatment, the entire foot or part of the leg may be lost to disease.



Plaque Weakens the Artery Wall

An aneurysm is also caused by the buildup of plaque. But instead of blocking the artery, the plaque weakens the artery wall. Blood pressure then causes the artery to balloon out. This makes the artery wall dangerously thin. Aneurysms can form in arteries throughout the body, but they often occur in the **abdominal aorta**. Surgery is needed to repair large aneurysms and prevent bursting.

DIAGNOSIS OF LOWER EXTREMITY ARTERY PROBLEMS

The diagnosis of lower extremity artery problems requires a medical history, physical exam, and one or more tests.

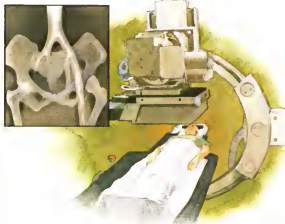
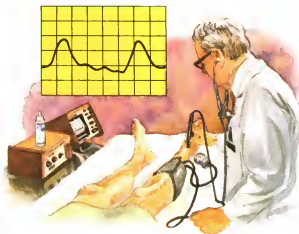


☐ History and Physical Exam

Your doctor will ask you about your symptoms. These may include pain when walking, a change in the color of the lower leg, or a non-healing sore on the foot. These signs may mean that blood flow to the leg and foot is reduced. To find out, blood pressure, pulse, and other blood flow measures are taken. Be sure to tell your doctor if you have other health problems.

☐ Doppler Imaging

A special device called a Doppler stethoscope uses sound waves to detect if blood is flowing through an artery and how fast it is flowing. The test is painless. It is commonly done while you are at rest and again after light exercise. Arteries in the lower leg or feet may be checked.



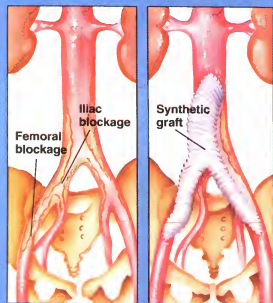
☐ Arteriography

To learn where a blockage is, a test called **arteriography** is done using x-rays and a special dye. The dye is injected into the aorta or an artery in the groin. X-ray images show how much (if any) dye gets through the blocked arteries. You may feel some warmth as the dye is injected.

SURGERY FOR LOWER EXTREMITY BLOCKAGES

Most people who have surgery for lower extremity artery problems have good results. Their symptoms are relieved or improved and they have no further complications. Blockages often occur in the iliac, femoral, and popliteal arteries.

Iliac-Femoral Blockages



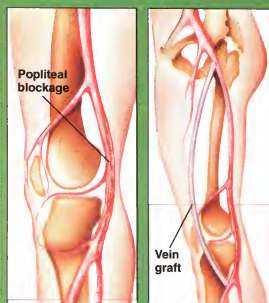
Blockage

Bypass

Surgery can restore blood flow to the leg. One way is to stitch a synthetic blood vessel (called a **graft**) around the site of the blockage. This procedure is called a **bypass**. Other ways are to remove the plaque (**endarterectomy**) or to open the artery by inflating a small balloon inside it (**angioplasty**). After angioplasty, small metal frames (**stents**) may be placed inside the artery to keep it open.

After surgery you will be closely monitored. You will be asked to sit up and move about as soon as possible. Your doctor will tell you when you can expect to go home and return to your normal activities. Your doctor may also prescribe pain-relieving or other medicines.

Popliteal Blockages



Blockage

Bypass

The surgery used most often to treat popliteal blockages is **bypass surgery**. A vein from the inner thigh is used to link the femoral and popliteal arteries. This link provides a new path for blood to flow to the lower leg and foot. Other surgery methods (endarterectomy or angioplasty) can also be used to treat these blockages.

After surgery you will be closely monitored. Because surgery involves the leg, walking may be hard for a few days. Your doctor will have you up and walking as soon as you're ready. You'll also be told when you can go home and return to your normal activities.

DIAGNOSIS OF AN ANEURYSM

Your doctor may first notice that you have an aneurysm during a routine exam or during a test for another problem. To confirm the diagnosis, you'll need a complete exam and special tests.



☐ History and Physical Exam

Your doctor will ask whether you have had low back pain or tenderness below the ribs. These symptoms sometimes suggest an abdominal aneurysm. Your doctor will also feel your abdomen for signs of swelling or tenderness. X-rays may be ordered to rule out other causes of your symptoms.



Aortic aneurysm



☐ Ultrasound

An ultrasound test can show whether you have an aortic aneurysm. Sound waves sent through the skin form an image on a TV screen. Most medium-to-large aneurysms can be seen. The test is quick and painless. All you will feel is the sensor sliding over your stomach.

Aortic aneurysm (CT)



☐ CT or MRI Scan

Your tests may include a CT scan (computed tomography) or an MRI scan (magnetic resonance imaging). These tests provide detailed images of your aneurysm. Before the CT scan, you may be given a special dye to make your blood vessels easier to see. You will not feel the scanner in either test.

Aortic aneurysm (MRI)



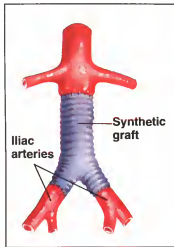
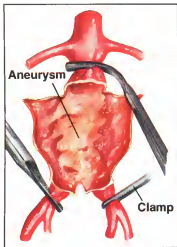
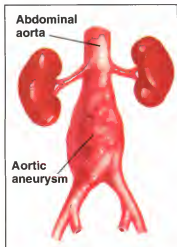
Aortic aneurysm

☐ Arteriography

Arteriography is a test that can show blood flow through your aneurysm. This test uses a special dye that makes your blood vessels show up clearly on the x-rays. The dye is injected into the aorta above the aneurysm. You may feel a warm flush as the dye is injected.

SURGERY FOR AN ANEURYSM

A large aneurysm in the abdomen is dangerous because it can leak or burst at any time. The longer you have a large aneurysm, the greater its risk of bursting. Surgery is needed to correct the problem before this happens.



❑ Surgery

During surgery, the weakened artery wall is replaced with a synthetic tube (graft). The surgery takes about 2 to 3 hours. You will be under general anesthesia so you won't feel pain. After making an incision, the surgeon clamps the aorta to prevent bleeding. The aneurysm is then opened and cleaned. Next, the graft is sewn to the aorta at one end and to the two iliac arteries at the other.

❑ After Surgery

After surgery you will be closely monitored. At first, you will be given all fluids through an intravenous (IV) line placed into a vein. As you recover, you will be asked to get out of bed and walk about. Your doctor will let you know when you can leave the hospital and return to your normal activities.



PREVENTING ARTERY PROBLEMS

Lower extremity occlusion and aneurysm can be serious health problems. But in most cases, surgery can correct the problem. After surgery, you can do your part by reducing your risk factors for atherosclerosis: Stop smoking, take medicines as prescribed, and limit the fat and salt you eat.



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